

Amendments to the Claims

Claim 1 (original): An isolated nucleic acid molecule having the sequence of SEQ ID NO: 1, said nucleic acid molecule comprising a nucleotide sequence encoding a MOAT-B transporter protein about 1350 amino acids in length, said encoded transporter protein comprising a multi-domain structure including a tandem repeat of nucleotide binding folds appended C-terminal to a hydrophobic domain, said nucleotide binding folds having Walker A and B ATP binding sites, said C-terminal domain having a plurality of membrane spanning helices.

Claim 2 (original): The nucleic acid molecule of claim 1, which is DNA.

Claim 3 (original): The DNA molecule of claim 2, which is a cDNA comprising a sequence approximately 5.9 kilobase pairs in length that encodes said MOAT-B transporter protein.

Claim 4 (presently amended): ~~The DNA molecule of claim 2, An isolated nucleic acid molecule~~ which is a gene comprising introns and exons, the exons of said gene [specifically hybridizing with the] comprising sequences which are identical to [of] SEQ ID NO 1, [and] said exons encoding said MOAT-B transporter protein.

Claim 5 (original): An isolated RNA molecule transcribed from the nucleic acid of claim 1.

Claim 6 (presently amended) ~~The A nucleic acid molecule of claim 1, [wherein said sequence encodes a~~ encoding a MOAT-B transporter protein having an amino acid sequence selected from the group consisting of SEQ ID NO: 2 and sequence encoded by natural allelic variants thereof.

Claims 7 (canceled)

Claims 8-44 (withdrawn)

Claim 45 (currently amended) : A plasmid comprising a nucleotide sequence ~~selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5 and SEQ ID NO: 7.~~

Claim 46 (currently amended) : A vector comprising a nucleotide sequence ~~selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5 and SEQ ID NO: 7.~~

Claim 47 (currently amended) : A retroviral vector comprising a nucleotide sequence ~~selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5 and SEQ ID NO: 7.~~

Claim 48 (currently amended) : A host cell comprising ~~at least one~~ nucleic acid molecule having a sequence ~~selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5 and SEQ ID NO: 7.~~

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Claim 49 (currently amended) : ~~A~~ The host cell as claimed in claim 48, wherein said host cell is selected from the group consisting of bacterial, fungal, mammalian, insect and plant cells.

Claim 50 (currently amended) : ~~A~~ The host cell as claimed in claim 48, wherein said nucleic acid is provided in a plasmid and is operably linked to mammalian regulatory elements which confer high expression and stability of mRNA transcribed from said nucleic acid.

Claim 51 (currently amended) : ~~A~~ The host cell as claimed in claim 48, wherein said nucleic acid is provided in a plasmid and is operably linked to mammalian regulatory control

elements in reverse anti-sense orientation.

Claims 52-55 (withdrawn)

Claim 56 (currently amended) : A method for screening in vitro a test compound for inhibition of MOAT mediated transport, comprising:

- a) providing a host cell expressing at least one MOAT-encoding nucleic acid having a sequence ~~selected from the group consisting of SEQ ID NOS: 1,3,5, and 7;~~
- b) contacting said host cell with a compound suspected of inhibiting MOAT-mediated transporter activity; and
- c) assessing inhibition of transport mediated by said compound.

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Claim 57 (currently amended) : ~~A~~ The method as claimed in claim 56, wherein inhibition of MOAT mediated transport is indicated by restoration of anticancer drug sensitivity.

Claim 58 (currently amended) : ~~A~~ The method as claimed in claim 57, wherein said inhibition of MOAT mediated transport is indicated by a reduction of transporter mediated cellular efflux of anticancer agents.

Claim 59 (withdrawn)

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